Guidelines

Truck Container

The truck container must be contaminant-free and maintained so that water contamination is prevented. Appropriate trucks include milk trucks, military-style water trucks, or others approved by DOH, the state Emergency Management Office, or local health departments. All container interiors must be visually inspected, flushed with disinfected water (see "Initial Truck Disinfection" guidelines), filled with water to be transported, and then tested for coliform organisms. Initial testing must show absence of coliform organisms before the truck is used for routine water hauling. Once the routine hauling operation has begun and precautions are in place to prevent contamination, testing does not need to be repeated during the course of the emergency response.

If a truck container has been previously used only for potable water and has been protected from possible contamination, it may be used without disinfection and testing for bacteria. The DOH-DDW regional office or the local health jurisdiction must approve use of these truck containers, unless the state or local emergency management division has pre-approved their use in emergencies.

Truck containers that cannot pass the initial testing criteria after disinfection (i.e. absence of coliforms) cannot be used. Trucks previously used for substances other than potable water will be evaluated on an individual basis. Consult with DOH-DDW before using trucks that may have previously carried toxic or other non-potable liquids.

All truck containers must be filled or emptied through an air gap or approved double-check valve assembly, in accordance with WAC 246-290-490. All containers must be completely enclosed and tightly sealed, with lockable lids or hatches. Containers that are open to the atmosphere during hauling cannot be used.

Initial Truck Disinfection

To ensure that water-hauling equipment is adequately disinfected before using, all rust and sediment must be rinsed or flushed from the tank. The tank should then be completely filled with water containing at least 50-60 parts per million (ppm) of chlorine. This chlorine solution should be held in the tank for at least 24 hours. All hoses, pumps, and other equipment used in handling water, should be disinfected the same way.

About one gallon of liquid bleach is required in every 1,000 gallons of water to produce 50-60 ppm. Bleach should be 5.25-6 percent hypochorite with no additives, such as scent or cleaning enhancers. To ensure adequate mixing, the bleach should be added in proportion to the water as the tank is being filled. For example, add approximately one-half gallon of bleach with each 500 gallons of water.

The chlorine solution must be flushed from the tank after 24 hours. It should not be discharged directly into a stream because it can kill fish and plants. In some cases, the chlorinated water may be treated with citric acid or thiosulfate to remove the chlorine before discharging it. Once the tank is emptied, refill it with the water to be transported and test for coliform bacteria. If coliforms are present, repeat the process. If the tank cannot be disinfected to eliminate coliforms, it must not be used.

Source of Water

The source for emergency trucked water must come from an approved public water supply. Another source of water can be used only with a formal written agreement between DOH or the local health department and the receiving purveyor. The unapproved source must be shown to be safe to use when treated to the minimal levels described in the "Handling" section.

Every precaution should be taken to ensure that the water remains potable once it is collected and transported. The receiving water system should check that the truck hauler is familiar with proper handling procedures at the source and during transport.

Receiving Tank

The water system's receiving tanks must be inspected to assure water quality during filling and later distribution to consumers. Receiving tanks must be cleaned and disinfected using the same procedures identified for the truck containers (see "Initial Truck Disinfection" section). The receiving tanks must be kept secure and protected from contamination throughout the emergency response. Comments regarding receiving tanks should be documented in written records.

The customer's receiving tank must be filled through an air gap or an approved double-check valve assembly in accordance with WAC 246-290-490.

Handling

All hoses and other handling equipment used in the operation must be stored off the ground at all times. They must be thoroughly flushed, disinfected, and then flushed again with the source water prior to use. Hoses should be capped at each end when they are not in use. The disinfection solution should be the same as that used for disinfecting the truck container.

All equipment surfaces that contact the potable water, including fill-point equipment, containers, caps, valves, filters, fittings, and other plumbing attachments should be regularly inspected and either disinfected or replaced as needed.

All equipment associated with the collection, transport, and delivery should be designed for potable water and must be able to be disinfected.

Water to be transported by tank trucks should contain a free chlorine residual of about one part per million (1 ppm or mg/L) at the beginning of the haul. This is done by adding 5-6 tablespoons (2.5-3 ounces) of common household bleach to each 1,000 gallons. The bleach should be 5.25-6 percent strength, unscented and without additives. It should be added in proportion to the quantity of water during filling to insure uniform distribution.

Photo credits: *Darigold, LTI Inc. dba Milky Way, and Pierce County Department of Emergency Management.*

Washington State Department of Health
Division of Drinking Water
PO Box 47828
Olympia, WA 98504-7828

Guidelines

Truck Transportation

Emergency Water Supply For Public Use

Washington State Department of Health
Environmental Health Programs
Division of Drinking Water

DOH Pub. #331-063 (Revised January 2002)

These guidelines are for water system utilities, companies or associations that need to deliver potable water to the public during emergencies. Although the Washington State Department of Health (DOH) does not encourage this method of supplying water, trucked water may be the only viable alternative in some situations. When trucking water, there are important considerations for protection of public health.

DOH recommends that someone with water treatment expertise be responsible for the operation and management of trucked potable water. Usually this expertise is found in municipal water utilities.

A water system that plans to use trucked water in response to an emergency should first contact the appropriate regional office of the DOH Division of Drinking Water (DOH-DDW) or local health department to discuss current requirements and approve the proposed operation [see WAC 246-290-415(2)(d) and 246-290-451(4)].

Documentation And Record-Keeping

The receiving water system is responsible for documenting and keeping proper records of the emergency trucked water operation. This includes:

- written records of the names and contact numbers of the hauler(s);
- the quantity delivered per trip;
- the approved water source(s) used;
- dates and times of delivery, free chlorine residual at point of delivery;
- assurance by the hauler (or a representative of the receiving system at the fill site) that proper disinfection was performed for each trip;
- the chlorine dose at the fill point and the free chlorine residual, if taken, after filling; and
- any notes regarding the receiving tank.

These records should be retained for at least six months for review upon request by health agencies, haulers, or the supplying water system.

For More Information

For more information on this issue, please call the regional office nearest you:

Northwest Regional Office (Kent)
(253) 395-6750

Southwest Regional Office (Olympia)
(360) 664-0768

Eastern Regional Office (Spokane)
(509) 456-3115

or email: dwinfo@doh.wa.gov

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